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TEACHERS' PROBLEMS WITH EXCEPTIONAL CHILDREN

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VI

Children of Lowered Vitality

Pamphlet No. 56

By

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Office of Education

UNITED STATES DEPARTMENT OF THE INTERIOR - - *Harold L. Ickes*, Secretary
OFFICE OF EDUCATION - - - - - - - - - - - - - - - - *George F. Zook*, Commissioner

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EDUCATION OF EXCEPTIONAL CHILDREN

Available Publications of the United States Office of Education

Order from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C.

1. Education of Exceptional Children:
   Bulletin, 1933, No. 2. Biennial Survey of Education in the United States, 1931–32, ch. VI. 10¢.
   Bulletin, 1931, No. 20. Biennial Survey of Education in the United States, 1928–30, vol. I, ch. XI. 10¢.
2. Teachers' Problems with Exceptional Children:
   Pamphlet No. 40, I. Blind and Partially Seeing Children. 5¢.
   Pamphlet No. 41, II. Gifted Children. 5¢.
   Pamphlet No. 49, III. Mentally Retarded Children. 5¢.
   Pamphlet No. 54, IV. Deaf and Hard-of-Hearing Children. 5¢.
   Pamphlet No. 55, V. Crippled Children. 5¢.
   Pamphlet No. 56, VI. Children of Lowered Vitality. 5¢.
   (Other pamphlets in this series to follow.)
3. Organization for Exceptional Children Within State Departments of Education. Pamphlet No. 42. 5¢.
4. Group Activities for Mentally Retarded Children—A Symposium. Bulletin, 1933, No. 7. 20¢.
5. Adjustment of Behavior Problems of School Children. Bulletin, 1932, No. 18. 10¢.
6. Parents' Problems with Exceptional Children. Bulletin, 1932, No. 14. 10¢.
7. Opportunities for the Preparation of Teachers of Exceptional Children. Bulletin, 1931, No. 21. 5¢.
8. Public School Education of Atypical Children. Bulletin, 1931, No. 10. 25¢.
9. The Speech Defective School Child. Bulletin, 1931, No. 7, 10¢.
10. Speech Defects and Their Correction. Pamphlet No. 22, 1931. 5¢. (For teachers, parents, and pupils.)
11. Schools and Classes for Delicate Children. Bulletin, 1930, No. 22. 20¢.
12. Education of Crippled Children. Bulletin, 1930, No. 11. 20¢.
13. Special Schools and Classes in Cities of 10,000 Population and More in the United States. Bulletin, 1930, No. 7. 10¢.
14. The Hard-of-Hearing Child. School Health Studies No. 13, 1927. 5¢.

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THEOLOGICAL SEMINARY

TEACHERS' PROBLEMS WITH EXCEPTIONAL CHILDREN

VI. Children of Lowered Vitality [1]

INTRODUCTION

"Education of all the children of all the people." The principle expressed in these words is so familiar to every teacher of the modern school that the phrase has become proverbial. In teachers' preparatory courses, in conferences of State teachers associations, in educational publications, on every educational platform one hears and reads repeatedly of the educational birthright of every child, of the responsibility of the school to make of pupil activities an experience in living which is within the child's power of realization and appreciation and which will at the same time help to prepare him for a contributing adult citizenship.

If this is the task of education, then the teacher comes face to face with the problem of adjustment. He must meet the challenge of the unending array of individual differences and individual needs which the pupils in his class present. His is the responsibility of adjusting his attitude and his methods, of adjusting the curriculum and materials to the capacities and the interests of the boys and girls who come daily under his instruction. We have attempted in our general educational scheme to group into one classroom or grade some 30 or 40 or more children who have reached approximately the same degree of academic achievement. Yet every teacher knows that among those 30 or 40 children there are some who would forge far ahead of accepted standards if given the opportunity to do so, and that there are others who lag far behind even in spite of every opportunity to work

[1] This is the sixth of a series of pamphlets dealing with teachers' problems with exceptional children. See back of title page for others in the series, as well as for a complete list of publications of the Office of Education on the education of exceptional children.

along with their fellows. There are some who are suffering from physical handicaps and others who show signs of serious emotional difficulty. To each of these the school owes an equal responsibility for that training which will serve best the individual's own needs and which will make of him a citizen who will be able and willing to serve his community according to his talents.

In many city school systems attempts have been made to provide for these individual needs of our boys and girls through various systems of classification, of special schools and classes, and of clinical service. In some there are well-organized departments of special education with excellent supervisory facilities and trained teachers. These are pointing the way toward the means of giving adequate attention to those pupils who deviate seriously from normal in physical, mental, or social equipment. To many who are teaching in such cities this series of pamphlets will not offer much that is new. It is more specifically designed, first, for those teachers who are working in rural or small urban districts where no special classes exist and who must provide for exceptional children as members of their own groups of supposedly normal pupils; and, second, for teachers of special classes who are handicapped by the absence of constructive supervision and perhaps even by their own lack of adequate preparation for this specialized type of education.

What, then, is the teacher's responsibility, if he belongs to either of these two groups? He cannot avoid the issue or run away from his problem, for there it is facing him day after day as he enters the classroom. If he is to meet it with any measure of success, then he has a fivefold program ahead of him.

First, he must know what the problem is.—Who are "exceptional" children? What types of deviations from normal demand special consideration? What constitutes a *serious* deviation? In answering these questions it is well to point to the classification which has been adopted by committees of the White House Conference. Eight major groups of "exceptional" children are recognized, as follows: (1) The crippled; (2) the deaf and the hard of hearing; (3) the blind and the partially seeing; (4) the speech defective; (5) children of lowered vitality, suffering from

anæmic, pretuberculous, or cardiac difficulties; (6) the mentally retarded; (7) the mentally gifted; (8) children presenting serious behavior problems.

The first 5 of these groups belong to the general classification of *physically* handicapped children, the next 2 constitute those who are *mentally* different, and the last group may be considered as *socially* maladjusted. The physical, mental, and social realms are thus all represented among our "exceptional" children. The particular needs of the various groups are, of course, quite different, but each child in any one of these groups offers a serious challenge to the teacher to seek out that which will mean the most for him individually in his educational development.

The second task before the teacher is to recognize the problem which exists in his own classroom.—The mere knowledge that there are exceptional children in the world will not help him unless he can find out for how many he himself is responsible. The teacher who has been assigned to a special class made up wholly of exceptional children is spared this difficulty, for presumably an accurate diagnosis has already been made of each case. But the teacher who must care for normal and exceptional pupils alike in one room has a real problem on his hands. He must know the symptoms of extreme deviation and he must learn to recognize those symptoms in the children before him. Perhaps he will find that one child cannot see the writing on the blackboard, that another is so hard of hearing that he has to be given a front seat and even there he does not always hear what the teacher says; that a third has been failing in his school work year after year; that a fourth is intellectually so keen that it is hard to keep him busy. It is not uncommon to find a group of four—or even more—such children in the same class, each exceptional in his own way and each presenting different needs. Some of them force themselves upon the teacher's attention; others need to be discovered.

Third, the ability to recognize extreme deviations comes only through careful observation and study of the individual child.—Every child is different from every other child and presents the need for sympathetic, conscientious, intelligent scrutiny. Sometimes this very scrutiny will reveal differ-

ences that the teacher had never dreamed of before and will show how very exceptional in one way or another the child really is. Whether in the regular classroom or in a special class, the need for child study is the same; for even though a preliminary diagnosis has already been made resulting in the child's assignment to a special class, yet it remains for the teacher to study his abilities and disabilities, his physical and his mental equipment, his personality, and his environment. The *whole* child becomes truly educated only when the teacher bends every energy to *know* and to *guide the whole child.*

The fourth responsibility of the teacher is to "apply first aid" to the exceptional children whom he has discovered in his room and whose natures and needs he has made the object of study. However inexperienced or untrained he may be in special education, there are some things which every teacher can do in meeting existing demands of physical, mental, or social deviations if he will but give the requisite time and thought to the problem. Particularly in the rural school is the teacher almost always forced to rely upon his own resources in handling the child who is either far below or above normal in intelligence, who needs some special physical attention, or who is causing a serious disturbance through his antisocial conduct. We may be working toward the organization of special classes in communities of all sizes, but while we are waiting for this objective to be realized the special problems still persist and demand the teacher's attention. His daily contact with the child makes him the logical person to give the greatest amount of help at least in an elementary way. It is he who must be prepared to adapt his methods and materials to the peculiar needs and possibilities of each exceptional child. It is he who must know what to do if he finds 1 hard-of-hearing child, 1 child with defective vision, and 1 seriously retarded child in his class. It is he, too, who must be able to meet the parents,[2] to explain the difficulties that prevail, and to secure for the child the attention at home which will supplement the provision which the school is able to make.

[2] For help in dealing with parents, teachers are referred to United States Office of Education Bulletin, 1932, No. 14, Parents' Problems with Exceptional Children.

Fifth, and last, the teacher should know where to seek further aid of a specialized type.—What resources does the community afford in medical or psychological assistance of clinical nature? What agencies exist in the county—in the State—in the Nation—that may be called upon? How can the teacher make contact with these agencies and what may he expect of them? Help that comes from without can bring to the earnest seeker substantial reenforcement. The resources of a whole nation may literally be called upon to help solve the problem of a single child tucked away somewhere in an inconspicuous country school district.

It is to help the teacher carry out this fivefold program in the interests of the exceptional child that this series of publications is being issued. The general nature of the problem has already been stated, with an enumeration of the eight major types of exceptional children with which we are concerned. The remaining steps of the program are considered in successive pamphlets, each of which deals with a particular type of child. How to recognize extreme deviations, how to study the child, how to meet some of the fundamental problems involved in teaching him, and how to secure specialized aid are all discussed in turn. It is hoped that each teacher may find in these pages some tangible values that will answer his questions and that can be applied to the local situation in which he finds himself.

Many teachers, however, will not rest content with this elementary knowledge of "first-aid" principles. Some of them will be seeking further training for more efficient service. Specialized courses which are now being offered in normal schools, colleges, and universities[3] furnish a real opportunity for enlarging one's understanding of exceptional children and increasing one's skill in dealing with them. Many of these courses are given during summer sessions so that no time need be lost during the school year. Here one may study under competent guidance the nature of subnormality or genius; the psychology of blindness or deafness or speech defect; the mental hygiene of behavior dis-

[3] See United States Office of Education Bulletin, 1931, No. 21, Opportunities for the Preparation of Teachers of Exceptional Children. This bulletin may be secured at 5 cents per copy from the Superintendent of Documents, Washington, D.C.

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orders; the mental background of the child who has a crippled body or other serious physical defect. One may study also the possibilities and the limitations inherent in these conditions, their educational needs, and their methods of treatment. And the goal toward which all such study is directed is that which challenges the teacher every day of his life—the ability to minimize the limitations and to capitalize the capacities of each child for his greatest personal happiness and his greatest service to the community.

PROBLEMS WITH CHILDREN OF LOWERED VITALITY

This pamphlet is concerned largely with the education and welfare of children who, because they are tubercular, malnourished, anæmic, or cardiopathic, need special provision or attention.

Tuberculin tests and X-ray pictures of 200,000 grade-school children in Massachusetts showed that 3½ percent had the childhood type of tuberculosis requiring observation to see that they do not become worse and 1½ percent needed medical attention.

The ratio of malnourished children varies according to the measures of good nutrition which are used, but conservative estimates place it at about 10 percent.

The statistics based upon surveys made in large cities when the classification of the American Heart Association was used indicate that the incidence of organic heart disease in school children ranges from 17 for each 1,000 in Chicago, to 6.6 in Boston, and 6.3 in Philadelphia. New York showed 16 in 1918 and 13.9 in 1922.

1. WHAT IS MEANT BY THE CHILD OF LOWERED VITALITY?

By children of lowered vitality we mean those who, because of weakening conditions, are not able to keep pace, physically, with normal children in their daily school life. As mentioned above these are chiefly children with the childhood form of tuberculosis, the anæmic, the malnourished, and those with serious heart lesions.

Good air, good simple food, rest, and proper exercise in the right amounts are requisites for good health and growth. An adequate school health program should look toward their achievement on behalf of every child. This accomplishment will require the removal of physical defects, the development of proper health habits, necessary regular exercise, with sufficient rest to prevent overfatigue. Children, because of the lack of one or more of these essentials, may develop certain conditions and diseases which classify them as children of lowered vitality.

2. WHAT ARE THE METHODS OF DISCOVERING THE CHILD WITH LOWERED VITALITY?

Children of lowered vitality of all types, who escape notice because of hidden physical defects, are to be found in every community. Each health and school organization of the State, county, and community should have as part of its program some definite method of finding and reporting such cases to a central authority responsible for their education and medical care. The principal and the regular classroom teacher will discover through observation and through the daily routine of health inspection many delicate children who may be at the point of failure, unable to compete successfully with physically normal pupils. Some cities have organized within the school system special means of locating these children, accompanied by adequate educational facilities suitable to their need, while others, unfortunately, have neither of these provisions and as a result the cases are not discovered until the disability has become well established.

3. WHAT CAN BE DONE FOR CHILDREN OF LOWERED VITALITY?

Certain fundamental factors pertaining to care and treatment apply to all types of children of lowered vitality. Early discovery is essential if the best results are to be obtained with these children. A program attempting to locate every child of lowered vitality of school age should be directed by some authorized organization. Through the cooperation of the board of health, the board of education, and private agencies interested in child welfare, assistance may be provided for all children who need it. Such provision may include the services of a city or traveling clinic, the family physician, nursing, and social service work which are so essential in bringing together the hospital, the school, and the home.

The classroom teacher under whose direction these children may come can put into effect certain practices, such as rest, health habits, supervised play, and regulated diet, necessary for all types of children of lowered vitality. More rest and less activity are prescribed generally for tubercu-

lous children and for all types of malnourished and cardiopathic cases than for normal children. Much can be done in the school through health education and the development of general health habits. The importance of these habits may be emphasized through daily health inspection, school lunches, and supervised play. Regular and proper home diet, midday school lunch supplemented by milk some time during the morning or afternoon should be supplied according to the need of the individual child, which will be determined largely by the seriousness of the case.

The home conditions and type of parental control have a decided influence upon the physical condition of the child. Some conditions affecting the health and welfare of school children can often be improved through the cooperation of all concerned, including the teacher, the visiting nurse, and the county home demonstrators.

4. HOW CAN WE GUARD AGAINST TUBERCULOSIS?

Locating children infected with tubercle bacilli is the first step both in protecting normal children from infection and in providing proper care for those infected. This can be done with reasonable accuracy by means of the tuberculin test and an X-ray picture of the chest. Preventive measures are important for the noninfected child. They include good environmental conditions in the school and the home, health instruction, and practices in such fundamentals as well-balanced diets, ventilation, conservation of energy, and the knowledge that a healthy body is the best prevention of disease.

Much can be done also for children who are infected and have passed the stage when preventive measures are effective. For such children the school can provide rest periods, school lunches, and properly directed play and recreational activities. Health education should emphasize fundamentals concerning these requisites. The curriculum should include information about daily food requirements of the child's body, proper ventilation adjusted to atmospheric conditions in home and school, and prevention and spread of diseases which contribute to the development of tuberculosis.

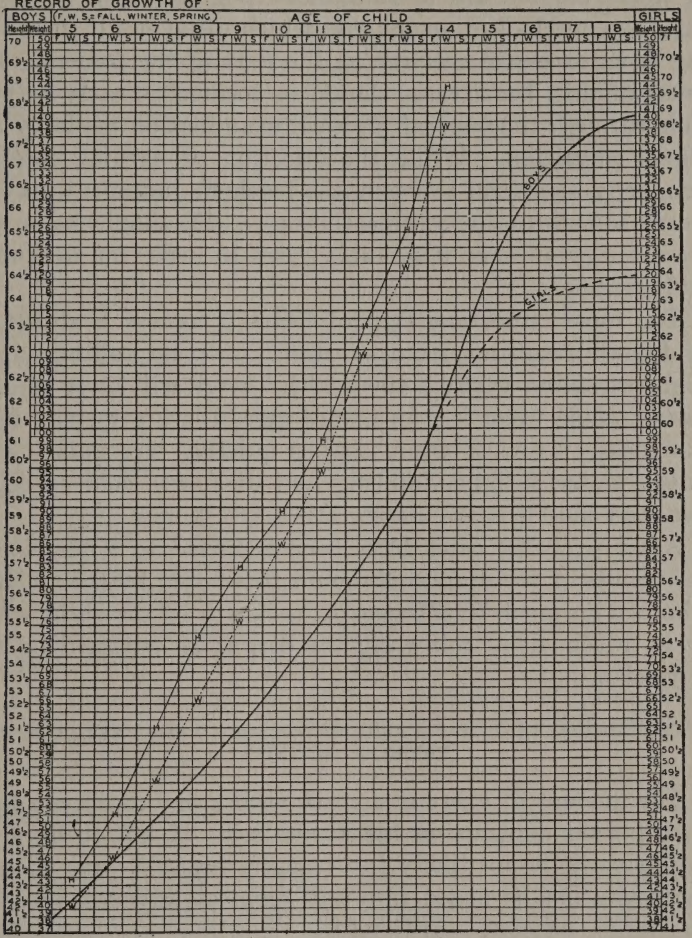
5. WHAT ARE THE CAUSES OF MALNUTRITION IN CHILDREN AND HOW CAN IT BE IDENTIFIED?

Failure to provide a child with any one or more of the essentials of health and growth may result in malnutrition. This lack of provision may be caused by ignorance, poverty, disease, or physical defects. Overfatigue due to child labor, lack of fresh air and sunlight, insufficient rest and sleep accompanied by faulty health habits and poor personal hygiene are contributing factors. Lack of intelligent parental control or nagging may be important factors in the causation of malnutrition. Children who are permitted to eat what and when they please, keep irregular sleeping hours, refuse medical attention by disregarding health and parental authority, and otherwise break the laws of health may bring about a condition which undermines their general health.

Malnutrition is not a disease which causes sufficient pain to demand immediate attention and treatment, and this fact accounts very much for its neglect. This low condition of health and body substance may be identified by many signs and symptoms which give some insight into the child's condition. The symptoms may be classified as general symptoms, bodily signs, nervous symptoms, and height-weight conditions. General symptoms include a lack of resistance to children's diseases, unduly frequent colds, lack of mental vigor with little power of concentration and attention. The objective signs of the undernourished child are a pale, thin, delicate appearance, with blue circles under the eyes, often accompanied by poor posture, with rounded shoulders and projecting shoulder blades, undeveloped muscles, loose and flabby flesh. Restlessness, inattention, irritability, forgetfulness, or definite mental retardation may also distinguish a malnourished child from a well-nourished one.

The height-weight ratio is of some importance in determining the physical condition of the delicate child, but is not valid as the only measure. It is approximate only and should be used with care. Measurements as made by the classroom teacher are subject to error, while the height-weight charts do not take into consideration racial and family development. It is impossible to give tables to which all children of a given age should conform; such tables, however, do show a general tendency of growth which

is significant. Height and weight record cards for classroom use sufficiently large to record the names of 48 children are available. An individual [4] height-weight record card, a companion to the classroom card, has been prepared for the pur-



pose of keeping a record of each child's growth throughout his school years. Regularity of growth is of more importance than the relation of weight to height.

[4] Individual Height-Weight Records (8 by 11¼ inches), per copy 1½ cents. Classroom Height and Weight Record (12½ by 24 inches), per copy 5 cents; additional copies 2 cents. Order from Superintendent of Documents, Government Printing Office, Washington, D.C.

6. WHAT ARE THE SYMPTOMS OF CARDIOPATHIC CASES AND HOW MAY THEY BE IDENTIFIED?

The penalty imposed by heart disease is the limitation of the individual's capacity for physical activity. Many cases of heart trouble are unconsciously neglected, or potential cases are overlooked, oversights which often result in suffering from excessive activity on the part of the patient. Because of this, heart cases should be located as early as possible through the general physical examination made by the school physician. While the selection of cardiac cases is primarily a medical problem, the teacher's judgment may be worth something in locating the cases. He should be on the alert for symptoms of possible cases to refer for diagnosis and treatment.

The most important sign of heart weakness is shortness of breath resulting from exertion, such as walking up a flight of stairs, whereas the healthy heart will meet the demands made upon it. In severe cases there also may be a shortness of breath while sitting quietly. Irregularity of pulse, undue fatigue, fainting and dizziness, cold extremities, and blue lips are among other symptoms.

After probable cases have been reported to a physician, the results of the diagnosis should be secured by the teacher, who can do much to safeguard the health of the child while he is in school by following the directions outlined by the physician.

7. TO WHAT EXTENT MAY CARDIOPATHIC CHILDREN PARTICIPATE IN PHYSICAL ACTIVITY?

The amount of exercise a child with a bad heart can take with benefit depends on the individual. If left to his own initiative he is not likely to overexert himself. He should, therefore, not be urged into any form of physical activity. In large schools, cardiopathic children are sometimes grouped for physical activities in order that the program adopted may be suited to their condition and needs. The American Heart Association makes the following classification of cardiac cases:

Class I.—Patients with organic heart disease who have no symptoms and their physical capabilities are the same as normal children. They are able to carry on ordinary physical activity without

discomfort and need but little supervision, but by way of precaution there should be some restriction as to their activity. These children should not participate in competitive athletics or in games which demand physical strain.

Class II.—Patients with organic heart disease unable to carry on ordinary activity without discomfort fall into two groups, those whose activity is slightly limited and those whose activity is greatly limited. The children of the first group may perform ordinary activities but should not exert themselves by fast running and hard play which produce undue fatigue. Jumping ropes, skipping, and long drills should be replaced by games which do not produce breathlessness and fatigue. In schools where there is no physical education director and in rural schools the teacher, through the supervised play period, may protect the cardiac pupil from too active participation in play and at the same time not isolate him from the social group.

For the second group of class II, particularly those who have heart infection, physical activity should be very limited, and even school attendance is apt to be detrimental to health.

Class III.—Patients with organic heart disease and symptoms or signs of heart failure when at rest, are unable to carry on any physical exercise without discomfort. These children should not attend school except in a few cases where proper supervision can be maintained; however, such children may attend school at irregular intervals.

None of the children should be permanently classified but should be reclassified by the physician from time to time. The teacher should change the school activities in accordance with the reclassification made by the physician.

Aside from following the specific directions laid down by the physician, the measures regarding nutrition, rest, and fresh air pertaining to the general health of all children should be followed.

8. WHAT SPECIAL EDUCATIONAL FACILITIES SHOULD BE PROVIDED FOR THE DELICATE CHILD?

Cities maintaining special classes for delicate children, with an educational program adjusted to the physical condition of the child who is usually attending school while he is still receiving medical care, will assign each child to the class best suited to his needs, as recommended by the physician. While special classrooms or special schools for the delicate are not essential, many large cities make such provision. These rooms or schools are equipped for hot lunches, much air and sunshine, and rest periods.

In large schools special classes for children with weak hearts may be formed but such children can also be placed with other delicate children. They should always be housed in rooms on the first floor unless an elevator is available. Provision should be made for frequent medical examinations, which are usually arranged by the health service of the school system. Where no such schools or classes are maintained special arrangements should be made whereby individual cases may have hot lunches, rest periods, and frequent medical examinations.

9. HOW MAY EDUCATIONAL FACILITIES BE OBTAINED FOR HANDICAPPED CHILDREN LIVING IN RURAL AREAS?

In a program of equalized educational opportunity for children in rural areas, the handicapped and the normal should receive equal consideration. One of the first steps in such a program is to secure a reasonably accurate census of children who are suffering from the various types of handicaps. Rural school administrators are often so engrossed in providing for the fundamentals of education that they have little time to consider such matters. Large cities generally provide special schools and classes for handicapped children and develop special techniques for their care and instruction beyond the knowledge and experience of many teachers. Many difficulties present themselves when one considers the establishment of special schools and classes in rural areas. No one small school has many such handicapped pupils, and the cases are spread over areas so large that it is not easy to get together a sufficient number to make instruction reasonable and economical, while funds for the special facilities required are not always available.

Various ways have been employed and suggested for making such facilities available. A class in a consolidated school may be established, accompanied by an adequate health program to meet the need. Smaller communities may contract with a nearby city for special care of their handicapped children, or a county school with county clinics may be established transporting the children daily or weekly from home to school. Itinerant teachers for home instruction may be provided either by State or local authority when

none of the other plans seems feasible or when the child is unable to attend school because of his physical condition.

10. WHAT IS THE GENERAL NATURE OF THE COURSE OF STUDY AND HEALTH DIRECTION TO BE FOLLOWED?

Instruction for delicate children who are able to attend school is the same as for average healthy ones. Their work should be suited to their mental capacity and should never be a source of anxiety or depression. In addition to the regular academic or industrial courses taught, a definite program of health instruction should be carried on to insure that the children establish good health habits.

11. WHAT CARE SHOULD THE DELICATE CHILD HAVE DURING THE SUMMER?

The physical care of the delicate child, including prevention and cure of tuberculosis and malnutrition, should not be discontinued at the close of the school year. Many summer health camps whose purpose is to improve the health of delicate children are provided under the auspices of local tuberculosis associations, service clubs, or public-school authorities. These camps usually provide medical and nursing supervision, with instruction in healthful living and help in establishment of health habits. The camp routine regulates the activity of the children; directs their rest, sleep, play, and other activities, giving special attention to quality and quantity of food.

The child with potential heart disease, or the tuberculous child, can be trained to adjust his life in accordance with his difficulty. The time spent at the camp should be long enough to enable the child to adjust his methods of living to his handicap and to build up health habits which will contribute to his improvement after his return home.

SUGGESTIONS FOR READING

DELICATE CHILD

EMERSON, WILLIAM R. P. Nutrition and growth in children. New York, D. Appleton & Co., 1922. 341 p.

This study centers about the problems of malnutrition and its treatment. It considers the diagnosis of malnutrition, home control of the situation, and the nutrition program of the school.

GEBHART, JOHN CHARLES. Malnutrition and school feeding. Washington, Government Printing Office, 1922. 39 p. (United States Bureau of Education (now Office of Education), Bulletin, 1921, no. 37.)

"Malnutrition is a term used to indicate a general condition of less than normal physical and mental vigor. While the causes of malnutrition are many, incorrect or inadequate diet appears all too often as one of the causes; hence, school feeding, which affords not only an opportunity to supplement the home food supply but also to teach correct food habits, becomes a most valuable agency in combating the evil." Problems of diagnosis, extent, and effects of malnutrition are considered; and the development and present status of school feeding in relation to this defect are outlined.

OPIE, E. L.; LANDIS, H. R. M.; MCPHEDRAN, F. M.; *and* HETHERINGTON, H. W. Tuberculosis in public-school children. Philadelphia, University of Pennsylvania, Henry Phipps Institute, 1929. 636 p.

Discusses the diagnostic, medical, and educational phases of the problem, including the consideration of open-air schools for the treatment of tuberculosis.

RICHARDSON, FRANK H. Rebuilding the child; a study in malnutrition. New York, G. P. Putnam's Sons, 1927. 313 p.

"Malnutrition has been called the great disease of the American school child." This book considers the diagnosis of malnutrition, its symptoms, its relationship to other childhood problems, and its cure.

ROBERTS, LYDIA JANE. What is malnutrition? Washington, Government Printing Office, 1927. 19 p. (United States Children's Bureau, Publication No. 59, revised.)

Discusses the symptoms, extent, causes, and effects of malnutrition, together with the methods of treatment that have been adopted. Bibliography.

ROGERS, JAMES F. Physical defects of school children. Washington, Government Printing Office, 1929. 29 p. (United States Office of Education, School health studies, no. 15.)

A comprehensive analysis of the incidence of various types of physical defects in children. Includes consideration of vision, hearing, malnutrition, organic heart defects, tuberculosis, defective tonsils, and other difficulties found in the school population.

——— Schools and classes for delicate children. Washington, Government Printing Office, 1930. 65 p. (United States Office of Education, Bulletin, 1930, no. 22.)

A comprehensive survey of special educational needs of and facilities provided for delicate children throughout the country. It considers open-air school buildings, open-window rooms, nutrition classes, preventoria, and health camps, together with the educational program of each.

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